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**National Wildland Fire Outlook**  
**National Interagency Fire Center**  
**Predictive Services Group**



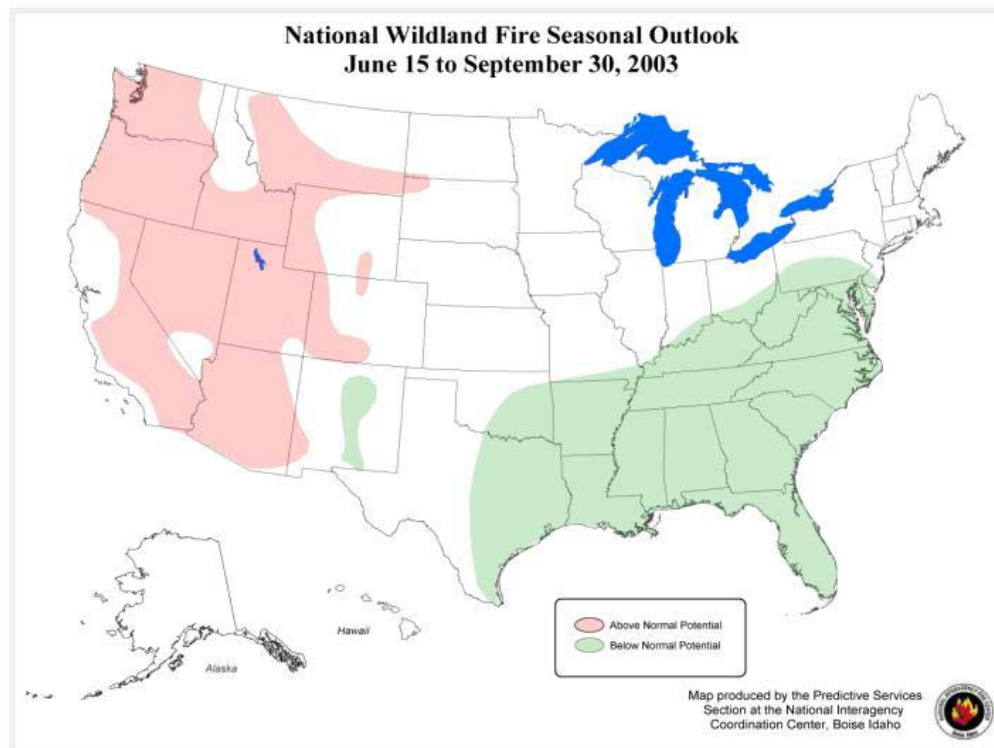
**Issued: June 15, 2003**

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**Wildland Fire Outlook – June through September, 2003**

The 2003 fire season is significantly below average to date. As of the end of June, nationally the number of fires and acres burned are projected to be 29,376 and 969,239 respectively. This corresponds to approximately 70% of historic fire activity in terms of fires and acres (1994-2002). The Southern Area is expecting below normal fire potential to persist. However, **much of the Interior West, Northwest, and portions of California and the Northern Rockies are expected to experience an above normal fire season** for the following reasons:

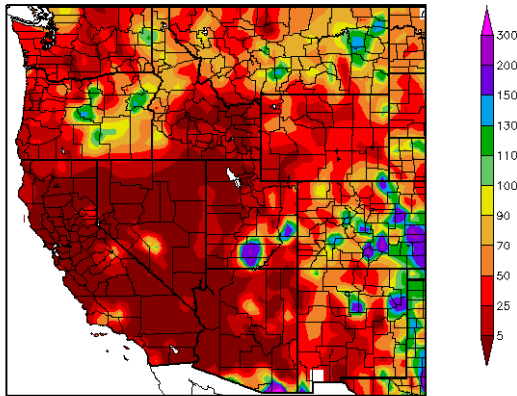
- Long-term drought persists over much of the interior West and June, which is a critical month in setting the stage for the summer fire season, has started out warm and dry and is expected to remain that way over most of the western US.
- Drought stressed and/or insect damaged vegetation is becoming more prevalent across the western states and will increase the potential for large wildfires at mid to high elevations.
- Spring rains and cool weather, while delaying the onset to fire season, have resulted in abundant grass and fine fuels over the majority of the west. These fuels are rapidly curing and will contribute to the rapid spread of fires once ignitions occur.
- Many areas in the west have already reached or will be experiencing critical fire danger indices by the end of June.
- Forecasts continue to call for a very active tropical storm season, which could result in an above average number of hurricanes that may impact the Southern Area through the summer months.



## Weather

Over the last 30 days, it has been much hotter and drier than normal in the West. Many areas have received less than half their normal rainfall (see map below) and temperatures have generally been averaging 5-10 degrees above normal. As a result, snows are melting quickly and are running about a month ahead of normal in some areas. Comparing the U.S. Drought Monitor (latest shown below) over the last 30 days, drought conditions have worsened over Texas, the Southwest, Great Basin, Alaska and Hawaii with dryness now showing up over western Washington.

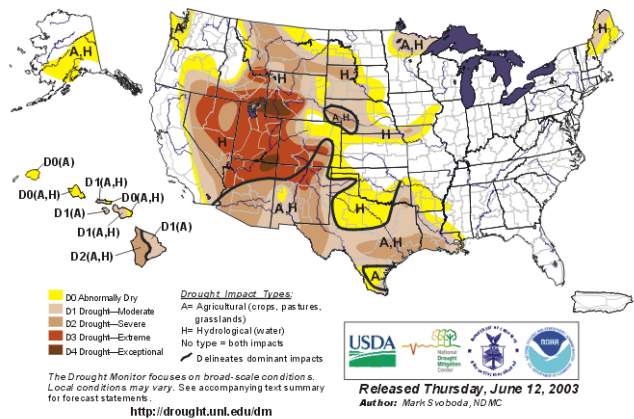
Percent of Normal Precipitation (%)  
5/12/2003 – 6/10/2003



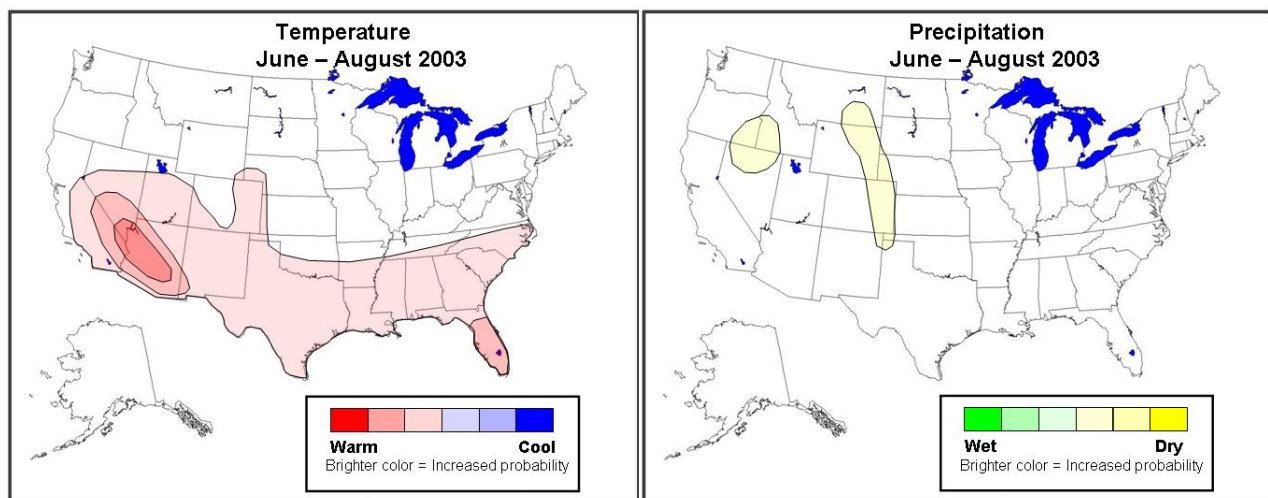
Generated 6/11/2003 at HPRCC

NOAA Regional Climate Centers

**U.S. Drought Monitor** June 10, 2003  
Valid 8 a.m. EDT



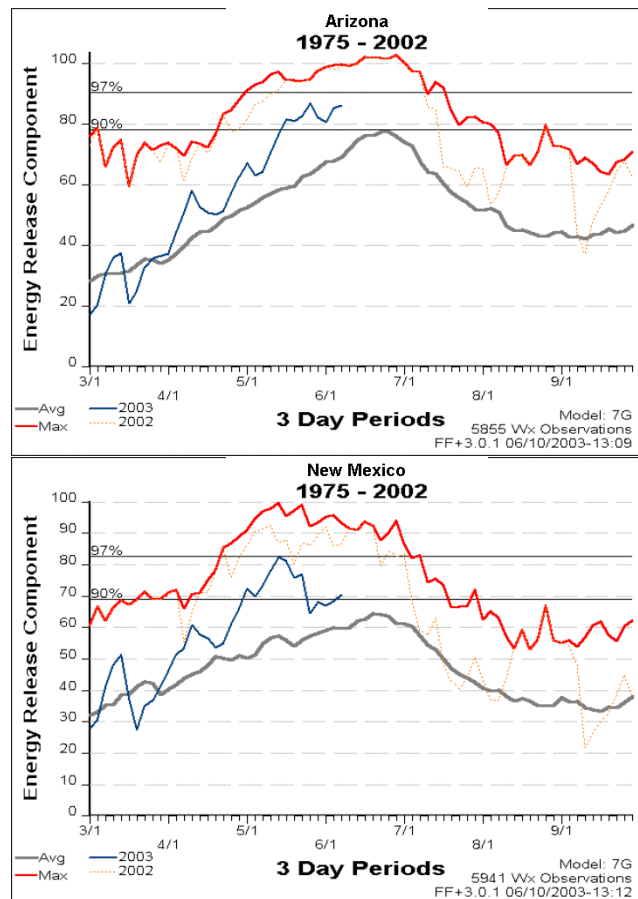
The El Niño episode of last winter has ended and La Niña conditions are now developing in the Pacific. However, the effects of La Niña will likely not be felt until the fall. The weather forecast for this summer and fall calls for warmer than normal temperatures over the Southwest, Great Basin and Southeast. Rainfall will be below normal in the northern Great Basin and from southeast Montana to eastern Colorado. Normal summer weather is expected for Alaska. The Southwest monsoon is expected to arrive on time (early July) and be of moderate strength. There are no indications as to the amount of lightning the West can expect this summer. An above average hurricane season is expected this year with greater odds than normal of hurricanes striking the Southeast.



## Geographic Area Discussions

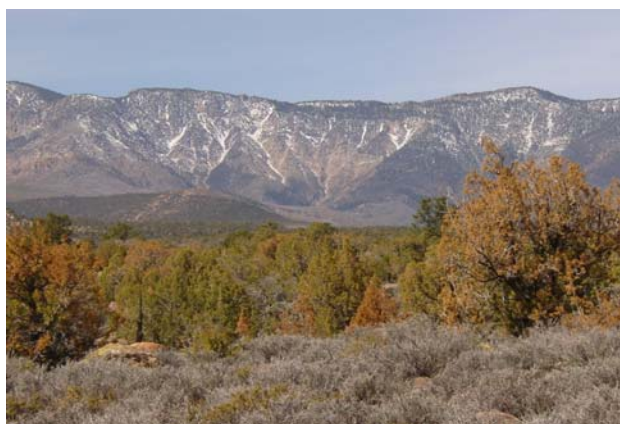
**Alaska: Potential: Normal.** Due to the dry winter and earlier than normal snowmelt, fire season began about 2 weeks early and was more active than normal through first week of June. To date, the number of fires has been near normal and acres less than normal; however there have been three large fires requiring Type II teams. These human caused fires occurred in the central interior and southwestern Alaska, areas that experienced low snowpack and early snowmelt. According to the Alaska Climate Research Center, May brought near normal temperatures to most of the state. Precipitation was below normal in the interior, west and southeast, near normal for south central and above normal in the southwest and arctic areas. Long-range forecasts call for equal chances of below, above or normal temperatures and precipitation through August. The lightning season usually begins the first week in June and lasts through mid-July. To date, there have been no problem lightning fires. Fire activity is expected to be normal this season with the greatest potential in the eastern interior, where long-term drying and periodic lightning over the next four weeks may combine to ignite new fires.

**Southwest: Potential: Below Normal to Above Normal.** Fire danger levels are very high to extreme over most of Arizona and western New Mexico at this time. 1000-hour fuel moistures are averaging about 20% drier than normal across the western portion of the area. A shift towards drier weather combined with the effects of the underlying long-term drought will cause fire danger indices to increase above the 90<sup>th</sup> percentile across Arizona and western New Mexico and approach the 97<sup>th</sup> percentile in portions of Arizona. There remains a high probability of dry lightning between now and the onset of the monsoons, which will likely result in several large fires near and west of the continental divide. Large fire potential across the eastern half of New Mexico is near or below seasonal averages due to moisture received earlier this season. This area will likely be tempered by cooler and more humid conditions. Therefore the chance for most project fires east of the continental divide has likely peaked and is not expected to increase again for more than a few days at a time for the remainder of the season. In addition, there is a lower than normal probability of large fire occurrence along the New Mexico central mountain chain. The Energy Release Component graphs (see inserts) for Arizona and New Mexico depict the current overall situation for both of these states. At this time, a normal onset to the monsoons is expected, which typically begins in early July.



**Northern Rockies: Potential: Normal to Above Normal.** There has been significant moisture over portions of the geographic area since January 2003. Improvements have been seen in the mountains of southern and southwestern Montana, the northeast slopes of the Rocky Mountains, eastern Montana and North Dakota. However, long-term drought persists over much of the area and will play an important role in the fire season. At this time there is little long-term forecast skill projected for the summer months in this area, resulting in equal chances of below normal, normal, or above normal temperatures and precipitation for the Northern Rockies. However, a warm, dry pattern is expected to return to the area by mid-July, which is typical. A normal seasonal drying pattern by mid-July should set the stage for large fire growth by August, resulting primarily from isolated, mainly dry thunderstorms. The summer drying trend will continue into early September when season ending precipitation should begin. Dry fuels and stressed vegetation resulting from the extended drought are expected to increase the potential for large fire activity during August and early September. For example, there are significant mountain pine beetle, spruce budworm, and Douglas-fir bark beetle outbreaks impacting timbered areas, which will contribute to fuel loadings, fire intensity, crown fire initiation and large fire development.

**Great Basin: Potential: Normal to Above Normal.** Long-term drought continues to have strong implications for the fire season in the Great Basin. However early spring precipitation has promoted annual grass germination and growth, resulting in increased continuity and volume of fine fuels across much of the area that will contribute to increased potential for large, intense fire activity during the summer months. Warm, dry conditions beginning in mid-May have led to early green-up and curing of these fine fuels in some areas, which may prolong fire season for the Great Basin. In addition, increases in tree and shrub mortality due to water deficits and insect infestations will further contribute to extreme fuel conditions (see image). Above normal fire potential is expected over the majority of the Great Basin with the exception of southwest Nevada and the extreme southeastern portion of Utah.



**Northwest: Potential: Normal to Above Normal.** Although fire activity has been below average thus far in 2003, fire potential has significantly expanded from earlier predictions in the Northwest Area. This is due to a number of factors including:

- Continued long-term drought conditions in eastern Oregon
- Below normal winter snowpack throughout Washington and Oregon
- Early snowmelt, especially in the low and mid elevation areas
- A dry May in most areas and a projection of a drier than normal June
- Abundant fine fuel loadings due to early spring rains
- Fuel moisture and fire danger indices trending above normal for this time of year
- Long range forecasts that favor slightly warmer and drier than normal summer months

Two to three episodes of dry lightning can be expected during the forecast period. Large fire development and subsequent resource shortages are directly related to these lightning events. The probability of a dry lightning episode increases to approximately 70% in July and August. Much of the area, except the northeast corner of Washington, is likely to experience a very active fire season.



**N. and S. California: Potential: Normal to Above Normal.** There are two areas of particular concern regarding fuel conditions in California. One is the east side of the Sierra Range from the Inyo National Forest to the Modoc Plateau. Fire danger indices in some of these areas are currently approaching critical levels. The second concern involves the significant brush mortality and drought/bug-killed timber areas of Southern California (see image of Lake Arrowhead Area). The Los Padres, Angeles, and Cleveland National Forests have low to moderate levels of timber and brush mortality while the Sequoia and San Bernardino National Forests have moderate to high mortality levels. Significant portions of the affected areas are in communities within the urban interface in and around the three southern forests. These areas have a high potential for human-caused fires and many are located in typically windy terrain. Winter and spring precipitation have encouraged annual grass growth, increasing the continuity and volume of fine fuels present in forest and desert areas. These conditions create the potential for rapid fire spread and extreme fire behavior even at moderate to high fire danger levels. Generally, fire danger conditions are likely to remain moderate in areas affected by onshore flow through late June in southern California, but then increase to above normal as fine fuels cure and higher elevation areas dry out. Elsewhere, indications from current weather and climate outlooks suggest fire season will start during typical time frames across much of California. Fire danger is expected to be above normal in many parts of the state including most of southern California, the east side of the Sierra Range and portions of northern California.



**Rocky Mountain: Potential: Normal to Above Normal.** Currently, fire danger indices are at, or are soon expected to approach, the 90<sup>th</sup> percentile in the southwestern and Big Horn Basin areas of Wyoming and the southwest and northwestern plateau areas of Colorado. Satellite greenness imagery also indicates drier than normal conditions in southwest Wyoming (Exceptional Drought Area) and near the Dinosaur region of northwest Colorado, as well as portions of southwest Colorado. The greatest potential for above average fire activity prior to the monsoons (June and early July) is along the Northern Front Range, southwestern Wyoming and in western and southern portions of Colorado. Above average potential will then transition into western Wyoming later in the summer. Typically 75% of the Rocky Mountain Area fires occur between June 1 and September 30, which is similar to fire seasons in other areas of the West.

**Eastern Area: Potential: Below Normal to Normal.** Much of the Mid-Atlantic States received above normal rainfall through the spring of 2003 while portions of the northern Minnesota and far northern New England states received below normal amounts. Occasional rainfall has fallen over these areas through the early summer months, however 1000-hour fuel moistures in northeastern parts of Minnesota are still in the 16 to 19 percent range at this time. Below normal fire potential is expected over the far southern Big Rivers states as well as the southern and eastern Mid-Atlantic States. The remainder of the Eastern Area is projected to have normal fire potential for the rest of the summer and early fall of 2003. If dry conditions persist, conditions in northeast Minnesota, including the Boundary Water Canoe Area will need to be monitored closely as the season progresses.

**Southern Area: Potential: Below Normal to Normal.** Weather conditions have continued to dampen fire potential over the majority of the Southern Area. Most fire danger indices remain below normal for this time of the year. Overall fire risk during the remainder of the spring should remain in the normal to below normal range. Current forecasts call for a very active tropical storm season, which could result in an above average number of hurricanes that may impact the area through the summer months.

Note: Complete geographic area assessments are available at each GACC website. These websites can also be accessed through the NICC webpage at: <http://www.nifc.gov/news/nicc.html>